

**What is claimed is:**

1. A system for maintaining and utilizing component cross reference data, the system being included in a component exchange system, the system being configured to enable a user to access a master cross reference list of components to guide component trading decisions on the component exchange system, the system comprising:

at least one user interface configured to at least one of receive data indicating at least one internal part number and at least one manufacturer part number for a component identified as an approved substitute component and output data included in the master cross reference list of components;

a master cross reference module configured to identify at least one inferred equivalent component based on the data indicating the at least one internal part number and the at least one manufacturer part number for the component identified as the approved substitute component; and

a master cross reference data structure configured to store the identity of at least one inferred equivalent component, the at least one internal part number and the at least one manufacturer part number for the component identified as the approved substitute component,

wherein the master cross reference module is configured to determine, output or store data to the master cross reference data structure, that data indicating the identity of at least one inferred equivalent component, the at least one internal part number and the at least one manufacturer part number for the component identified as the approved substitute component in association with a universal part number.

2. The system of claim 1, wherein the data indicating the identity of the inferred equivalent component includes a manufacturer part number.

3. The system of claim 1, wherein the master cross reference module indicates in the data output or stored to the master cross reference data structure, whether a manufacturer part number associated with a universal part number is an approved substitute component or an inferred equivalent component.

4. The system of claim 3, wherein the data indicating the identity of the at least one manufacturer part number for the component identified as the approved substitute component includes data indicating an identity of a data source indicating the approved substitute component.

5. The system of claim 1, wherein data included in the master cross reference list of components is optionally output to a user based on at least one security mechanism that allows for at least two levels of security associated with parts of that data and users accessing that data.

6. The system of claim 1, further comprising:

a master parts reference module configured to analyze data received by the master cross reference module via the at least one user interface; and

a master cross reference data structure configured to store reference data relating to trading partners, that data including at least one internal part number, at least one manufacturer part number, and at least one trading partner identity,

wherein the master parts reference module is configured to compare the data received by the master cross reference module via the at least one user interface with data included in the master parts reference data structure to identify received data that is inconsistent with the reference data.

7. The system of claim 6, further comprising a component market memory that includes both the master parts reference data structure and the master cross reference data structure.

8. The system of claim 6, wherein, following a determination that received data is inconsistent with reference data, the master parts reference module, queries a source of the inconsistent data to indicate whether the inconsistent data is erroneous or new data.

9. The system of claim 1, wherein the master cross reference module is configured to perform analysis on data received from the at least one user interface via the

master parts reference module and the master parts reference module does not output data that it has identified as inconsistent to the master cross reference module.

10. The system of claim 1, further comprising at least one of:

a plan module configured to cooperate with the master cross reference module to output alerts regarding a potential component delivery problem and guidance regarding at least one approved substitute component or inferred equivalent component to avoid the potential component delivery problem;

a knowledge module configured to cooperate with the master cross reference module to identify component market trends;

a design module configured to cooperate with the master cross reference module to provide improved design information to users;

an order module configured to cooperate with the master cross reference module to at least one of reduce procurement cycle time, eliminate manual component sorting and processing, create a comprehensive audit trail and improve access to competitive pricing and available component inventories.

a trade module configured to cooperate with the master cross reference module to provide guidance on how to at least one of leverage component market size to source components in time-sensitive situations, create links with component suppliers, liquidate component inventory quickly without compromising demand for currently available components, and leveraging component markets to improve margin; and

a move module configured to cooperate with the master cross reference module to monitor supply chain performance tracking and improve supply chain management.

11. The system of claim 1, further comprising a buy/sell data comparator module configured to compare trading data from a plurality of trading partners to identify compatible component buy/sell requests.

12. The system of claim 1, further comprising a request data analyzer module configured to analyze data received via the at least one interface to identify relevant data associated with a potential component trade.

13. The system of claim 1, wherein the master cross reference module is configured to determine if at least one manufacturer part number associated with a first universal part number is an inferred equivalent of at least another manufacturer part number associated with a second universal part number and, if so, to associate those manufacturer part numbers with the first universal part number.

14. The system of claim 1, wherein the master cross reference module is configured to determine, for at least one manufacturer part number, a degree of market use of a component associated with that manufacturer part number based on how many times that manufacturer part number has been identified as an approved substitute component in the data received via the at least one user interface.

15. The system of claim 1, wherein the at least one user interface includes a procurement user interface configured to provide access to at least one internal part number linked to a plurality of manufacturer part numbers approved for purchase and further linked to other internal part numbers identifying in house inventory that has not yet been committed to manufacturing.

16. The system of claim 1, wherein the at least one user interface includes a design engineer user interface configured to provide access to data stored in the master cross reference data structure including the at least one approved substitute component and the at least one inferred equivalent component in association with the universal part number.

17. The system of claim 1, wherein the at least one user interface includes a component manufacturer user interface configured to provide access to data indicating design-in success against competitive manufacturers' products for MPNs through percentages depicting design engineering selections by component buyers, the percentages being determined based on data stored in the master cross reference data structure.

18. The system of claim 1, wherein the at least one user interface includes a logistics user interface configured to provide access to logistics data associated with a component associated with the at least one manufacturer part number.

19. A method for maintaining and utilizing component cross reference data, the method being used in connection with a component exchange system, the method enabling a user to access a master cross reference list of components to guide component trading decisions on the component exchange system, the method comprising:

accessing data indicating a plurality of approved substitute components associated with a plurality of internal part numbers and a plurality of trading partner identification data;

assigning a universal part number to each unique combination of internal part number and trading partner identification;

sorting the accessed data following the assignment of the universal part numbers to group data by manufacturer part number and component manufacturer; and

identifying at least one inferred equivalent component associated with at least one approved substitute component based on transitive property analysis of the sorted data.

20. The method of claim 19, further comprising outputting or storing data indicating the identifying at least one inferred equivalent component associated with the at least one approved substitute component and an associated universal part number.